

Open Access: The Changing Face of Scientific Publishing

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ABSTRACT

The debate on open access to scientific literature that has been raging in scholarly circles for quite some time now has been fueled further by the recent developments in the realm of the open access movement. This article is a short commentary on the current scenario, challenges, and the future of the open access movement.

Keywords: Access to information, free access, information dissemination, open access, publication, publishing

Introduction

"Information is power. But like all power, there are those who want to keep it for themselves. The world's entire scientific and cultural heritage, published over centuries in books and journals, is increasingly being digitized and locked up by a handful of private corporations..."

(The Guerilla Open Access Manifesto^[1])

With the tremendous increase in the quantum of knowledge and the advent of numerous modalities of information dissemination over the past decades, the debate on the price and permissions for access to this knowledge is at an all-time high. Hundreds of academicians and activists worldwide are advocating free and unrestricted online access to this scientific literature citing ethical, moral, and societal responsibilities towards the global community, especially considering that a lot of this knowledge is generated by research grants.

Open Access: Definition, Types, and Terminologies

Scholarly open access has been variously defined over the years, and controversies over definitions are still impeding the open access movement. The Budapest Open Access Initiative^[2] stated, "By 'open access' to this literature, we mean its free availability on the

public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself."

This has subsequently been added upon by the Bethesda Statement on Open Access Publishing^[3] and the Berlin declaration on Open Access to Scientific Knowledge^[4] to yield a somewhat collaborative and comprehensive consensus, popularly called as the Budapest-Bethesda-Berlin (BBB) definition^[5] by the open access activist Peter Suber. While the intricacies of each of the definitions can be a separate topic by themselves, the essence is freedom of access to scholarly literature from 'price and permission barriers'.

Open access has traditionally been categorized into types like Green OA (self-archiving of pre and post-prints), Gold OA (fully accessible articles in OA journals), and Hybrid OA (individual articles are made OA in what otherwise are subscription-only journals). Some journals also make articles open access after a specific embargo period. A host of new terminologies has come into play in the world of open access in the recent years [Table 1].

Free Access is Not Open Access: The Case of HINARI

The Health Inter Network Access to Research Initiative (HINARI) is a landmark endeavor of the World Health

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Table 1: Terminologies in open access

Gold OA	Peer reviewed open access scholarly journals, which involves author side payment of article processing charges and thus available to any reader with no financial barriers.
Green OA	Self-archiving by the author (pre or post-print, monographs, book chapters, grey literature, peer reviewed conference proceedings) in repositories-institutional/disciplinary/personal.
Hybrid access	Not fully open access. Select articles/sections available free. A model where authors can choose to make their articles open access after paying the OA charges. In certain cases, editors use editorial discretion to make certain articles/sections open access.
Platinum OA	No author-side fees. Funded by subsidies, volunteer work, grants or advertizing.

OA: Open access

Organization in collaboration with the journal partners to promote access to information in major scientific journals to researchers in low income nations at free of cost or low costs. However, the program received a rude jolt when five publishers decided to withdraw^[6] free access to over 2,000 journals in several poor nations including Bangladesh. This led to a global uproar among the scientific community, and leading researchers called it a 'major step backwards for science, health, and development in low-income countries'.^[7] Access was subsequently restored by the publishers but the HINARI fiasco showed the world that free access is not a sustainable alternative to not-for-profit universal open access.

Current Global Policies in Open Access

The National Institutes of Health (NIH) Public Access Policy mandates publications from NIH funded research to be made publicly available through PubMed Central, within a stipulated time period after publication.^[8] The United Kingdom government, based on recommendations of the report of the Finch Group, also indicated their support towards making publicly funded research 'open access', and favored the 'gold' model over 'green'.^[9] Deposition in an online repository is a requisite for publications resulting from publicly funded research in Ireland.^[10] The Wellcome Trust also requires full-text of any research paper resulting partly or wholly from research funded by its grants to be made publicly available through PubMed Central and Europe PubMed Central.^[11] Such policies are increasingly being adopted by global funding bodies to free publicly funded research from the restricted paywalls.

Guerilla Open Access: The Legal, Ethical, and Moral Concerns

The global academic community has been shocked very recently by the news of the apparent suicide of the hacktivist and open access/open speech advocate, Aaron Swartz, who was being tried by the United States government on a range of charges, which could lead to imprisonment, if convicted on all counts, for a prolonged period of time.^[12] Swartz was charged after he downloaded,

in September 2010, about 4.8 million articles from the online academic archive, Journal Storage (JSTOR). Following Swartz's indictment, an online activist who identified himself as Greg Maxwell, posted thousands of documents of the Philosophical Transactions of the Royal Society on a popular file sharing website as a token of cyber-protest. Aaron Swartz's attack on the JSTOR brought the issue of pay-walling of publicly funded research into light and the debate for open access resurfaced. Although his methods were legally questionable, he managed to bring to the fore a very important issue surrounding academic publishing. These activists brought guerilla open access out into the open. Although sharing of paywalled articles between academics for research or other academic purposes is outside the ambit of copyright laws, it has long been tolerated by the publishing industry in order to encourage academic activities. This may even be accepted in some academic circles under the ambit of 'fair use', especially ones in the developing nations, where cost of accessing research articles published in the premier journals may be prohibitively expensive. This especially applies to the independent researchers or unfunded researchers (including students and residents) who have neither the money nor the institutional support to obtain pay-walled articles. However, many OA activists, while agreeing to the spirit, disagree with the unlawful component of Guerilla Open Access. Peter Suber, one of the first pioneers advocating for open access resisted the illegal ploys employed in the guerilla open access manifesto. In his now-archived blog, he expressed his sentiments clearly, when he wrote,^[13]

"..For works not in the public domain, OA depends on copyright-holder consent. Two related conclusions follow: (1) OA is not Napster for science. It's about lawful sharing, not sharing in disregard of law. (2) OA to copyrighted works is voluntary, even if it is sometimes a condition of a voluntary contract, such as an employment or funding contract. There is no vigilante OA, no infringing, expropriating, or piratical OA..."

Predatory Open Access

Over the past few years, a host of new journals have developed a novel scheme. These journals are abusing the system of open access to target the author fees, from unsuspecting authors, and are publishing shoddy research with dubious pre-publication peer review. Popularly known as 'predatory open access' journals, they exist in an ethically questionable environment, and are threatening the spirit of the open access movement in general.^[14] Jeffrey Beall, an academic librarian from the University of Colorado Denver, put together the "Criteria for Determining Predatory Open-Access Publishers"^[15] which is a valuable tool for identifying these unscrupulous publishers, although there has been room for debate regarding the inclusion of certain members, as would be expected from such a controversial, yet much-needed effort.

Conclusion

These are interesting times for the OA Movement. While the case of Aaron Swartz has brought to light the probable legal

consequences of breaching copyrights and paywalls, the voice for OA, even from within the ambits of the legal restrictions, grows stronger. Funding bodies are increasingly mandating open access policies, and premier journals are adopting OA versions in recognition of this growing demand. The sustainability and economic feasibility of this model remains to be established in the long run, but at this critical juncture, open access is fast changing the face of scientific publishing.

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